

CLAIMS

1. A fire fighting apparatus comprising a plurality of spray heads (5a to 5e, 6a to 6e; 5a', 5b' to 5e'), a tube system (2, 3a to 3e, 4a to 4e; 2', 3a', 3e') for leading extinguishing medium from an extinguishing medium source having a volume for extinguishing medium to the spray heads, at least one drive gas source (9 to 12; 9' to 12') for driving extinguishing medium at a high pressure via the tube system to the spray heads and release means (8a, 8b) for activating at least one of the spray heads, **characterized** in that said at least one drive gas source (9 to 12; 9' to 12') is coupled to a long tube (2; 2') constituting part of the tube system in such a way that the tube together with said at least one drive gas source constitutes a hydraulic accumulator and the volume of the source of extinguishing medium is constituted by the volume of the tube at least to a substantial extent.

2. A fire fighting apparatus according to claim 1, **character-**
15 **ized** in that a plurality of drive gas sources (9 to 12; 9' to 12') are arranged
2 at a predetermined distance (l) from each other along the tube (2; 2').

3. A fire fighting apparatus according to claim 2, **characterized** in that a stop/opening valve (13 to 15; 13' to 15') for closing and opening the flow of extinguishing medium in the tube (2; 2') is arranged between
20 individual drive gas sources (9 to 12; 9' to 12').

3 4. A fire fighting apparatus according to claim 2, **characterized** in that the tube (2; 2') is divided into a number of main sections (1), each of them containing a drive gas source (9; 9') having a high pressure.

5. A fire fighting apparatus according to claim 4, **character-**
25 **ized** in that the drive gas sources are constituted by nitrogen bottles (9; 9')
having a pressure of 30 to 400 bar.

6. A fire fighting apparatus according to claim 4, **characterized** in that the main sections (b) comprise a number of zones (A), each of them containing a group of spray heads (5b to 5e, 6b, 6e; 5b' to 5e') or sprinklers.

7. A fire fighting apparatus according to claim 6, **characterized** in that release means (8a, 8b) are arranged along the tube (2; 2') within the zones (A) for releasing a group of spray heads (5b to 5e, 6b to 6e; 5b' to 5e') belonging to respective zone.

35 8. A fire fighting apparatus according to claim 7, **character-**
ized in that each group of spray heads (5b to 5e, 6b to 6e; 5b' to 5e') con-

tains a solenoid valve (7b to 7e; 7') to control at least one spray head belonging to the group (5b to 5e, 6b to 6e; 5b' to 5e').

9. A fire fighting apparatus according to ~~any one of the preceding~~ *claim 1* claims for being used in a tunnel (1; 1'), **characterized** in that the tube system (2, 3a to 3e, 4a to 4e; 2', 3a', 3e') follows the longitudinal direction of the tunnel (1; 1').

10. A fire fighting apparatus according to claim 9, **characterized** in that the spray heads comprise first spray heads (5b to 5e) arranged in an upper part of the tunnel (1) and second spray heads (6b to 6e) arranged in a lower part of the tunnel, whereby the first spray heads are arranged to spray mainly in the opposite direction with respect to the second spray heads.

11. A fire fighting apparatus according to claim 1, **characterized** in that the spray heads (5a to 5e, 6b to 6e; 5a' to 5e') ~~are of a type capable of producing~~ *produce* a mist-like spray.

12. A fire fighting apparatus according to claim 1, **characterized** in that the extinguishing medium is water-based liquid.

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Add E2

Add b15